Walgreens Health Initiatives

Health Brief

Menopause

The more you know about health issues—and your own health in particular—the better you can take care of yourself. This *Health Brief* provides basic health information. To learn more about this topic, please consult your doctor or pharmacist.

Sometimes it's called the "change of life"; sometimes simply "the change." Whatever you call it, menopause signals a normal, natural biological change in a woman's body. That's because at menopause, menstruation stops permanently, and pregnancy no longer can occur. It also means other hormonal changes are taking place in a woman's body—some that put a woman at risk for disease, including coronary artery disease and osteoporosis.

Menopause is considered complete when a woman has been without her monthly periods (menses) for one year and no other causes for the cessation can be identified. On average, menopause occurs around age 51. Most women experience menopause between the ages of 45 and 55. However, the age at which menopause begins varies with each woman. In fact, some women experience menopause as early as their 30s or as late as their 60s.

Even though life expectancy estimates are continuously increasing, age at the time of menopause has remained unchanged. Most women spend one-third to one-half of their lifetime in postmenopause.[1] For this reason alone, menopausal and postmenopausal women should focus on their health, be aware of the potential health risks associated with this time in their life, and learn about self-care and preventive health steps to avoid illness.

Menopause, By Definition[1]

Menopause results when the ovaries (the female reproductive glands located on either side of the uterus) produce decreased amounts of the hormones estrogen and progesterone. As a woman nears menopause, her estrogen levels begin to fluctuate, causing a change in her menstrual periods. These initial hormonal changes usually occur when a woman reaches her mid-40s.

The following definitions explain the different stages and components of menopause:

- **Perimenopause:** This stage, when hormonal

continued on page 2

changes begin, takes place over the six years prior to natural menopause. Periods may become irregular, and symptoms such as night sweats and hot flashes may begin to occur.

- **Menopause:** The end of menstruation, is confirmed after 12 consecutive months without a period. Menopause can also begin when both ovaries are removed or damaged.
- **Postmenopause:** This stage covers all the years following menopause. It is important to report any vaginal bleeding to your doctor to rule out other health problems.
- **Induced menopause:** This is immediate menopause caused by trauma or a medical intervention that damages or removes the ovaries. Interventions can include radiation therapy, chemotherapy, and surgical removal of the ovaries.
- **Temporary menopause:** Some medications, including hormone suppression therapy and the treatments above, may cause temporary menopause, which may be reversible.
- **Premature menopause:** This stage covers menopause that occurs before the age of 40, whether naturally or induced by trauma or infection. Causes include genetics, autoimmune disorders, trauma, or infection.
- **Estrogen:** This female hormone is produced mainly by the ovaries, as well as—in small amounts—by the liver, kidneys, adrenal glands, and fat cells. The ovaries begin producing estrogen at puberty to aid in shaping the developing female body. Production of estrogen continues until menopause.
- **Progesterone:** This female hormone, produced mainly in the ovaries, prepares the uterus to receive a fertilized egg and maintain pregnancy.

The Onset of Menopause[1]

Two factors influence the age at which menopause occurs: family history and/or genetics and smoking. In fact, smoking has been identified as a cause for *premature* menopause. Studies indicate that smoking may cause menopause to occur two years earlier than it naturally would in a non-smoker. How long a woman has been smoking and the number of cigarettes she smokes a day are both factors.

Although there are limited data to support the following, these factors also may play a role in the beginning of menopause:

- Nulliparity (that is, no history of pregnancy), medically treated depression, toxic chemical exposure, and treatment of childhood cancer with pelvic radiation and alkylating agents are associated with an earlier-than-average onset of menopause.
- The greater the number of pregnancies, on average, the later menopause occurs.
- Women who are overweight may experience later-than-average menopause.

Perimenopause: The Precursor of Menopause[1]

Perimenopause literally means "around" *(peri)* "the end of menstruation" *(menopause)*. *When* perimenopause actually begins and *how long* it lasts, however, are not an exact science. About 90 percent of perimenopausal women experience irregular menstrual cycles for four to eight years. However, for most women, perimenopause lasts approximately four years. Although it is possible, very few women abruptly stop menstruating with no prolonged irregularity.

continued on page 3

Certain health changes associated with perimenopause can last anywhere from a few months to a few years. Menstrual irregularities usually are the symptoms women notice first, including:

- having menstrual cycles more often than every 28 days
- bleeding that lasts fewer or more days than normal
- bleeding that is heavier or lighter than normal
- skipping several menstrual cycles and then menstruating again.

In addition, 75 percent of women may experience other symptoms such as hot flashes, night sweats, difficulty sleeping, and vaginal and urinary problems.[2] These symptoms are considered the "short-term" effects of menopause. Menopause is also associated with "long-term" effects, which include osteoporosis, heart disease, and possibly Alzheimer's disease.

The changes *you* may experience during your perimenopausal years are likely normal and natural, but they do signal the need for an evaluation by your healthcare provider. Perimenopause is an important time to visit your doctor. A number of screenings and treatment options can help identify and prevent or reduce menopause's short-term symptoms and may help protect against its long-term effects.

As women enter Menopause, their Follicle Stimulating Hormone (FSH) levels gradually rise. Once menopause has set in, FSH levels remain permanently high, and are detectable in urine. Today there are simple, self-diagnostic home-use test kits that measure FSH in urine (similar to at-home pregnancy tests). They are available at local pharmacies, and will accurately detect FSH about 90 percent of the time. These test kits allow women to learn whether or not they have elevated FSH levels, *not* if they are in menopause or perimenopause. The test should not be used to determine fertility, nor should decisions about contraception be based on test results. Your doctor can best determine whether or not you are in menopause or perimenopause.[23]

It is important to remember that during perimenopause, pregnancy still can occur—even with irregular periods. Although hormone production is dwindling during this time, it is not completely stopped, and ovulation is still occurring. In fact, women may still become pregnant during the first year after menopause. Therefore, contraception should still be utilized to prevent an unwanted pregnancy. Furthermore, women are still at risk of acquiring sexually transmitted diseases (STDs) after menopause. Condoms are the most effective method of protection against STDs.

The Symptoms of Menopause

Hot flashes are a sudden feeling of heat that rushes to the upper body and face, and sometimes may cause sweating or red blotchy skin in these areas. Hot flashes may be accompanied by nausea, dizziness, and headaches. Some women feel anxious and as if their heart beats faster. Following a hot flash, some women experience cold chills. Hot flashes and cold chills are associated with the changes in estrogen levels in a woman's body during menopause.

Hot flashes occur for one year in 85 percent of women.[3] Most hot flashes last 30 seconds to five minutes.[4] They can occur as often as several times a day or as infrequently as a few times a month. This range may vary from person to person. Most

continued on page 4

women will experience hot flashes their first two years postmenopause; however, some women may report these symptoms for 10 years or more.[2]

Hot, humid weather and confining spaces may increase the frequency of hot flashes in some women. To help manage hot flashes, dress in layers of breathable clothing, maintain a cool environment, and keep a cold nonalcoholic beverage at hand. Keeping a personal diary noting the frequency and possible triggers of your hot flashes may help you identify how to avoid those triggers. Certain foods may also trigger the onset of hot flashes, including spicy foods, caffeine, and alcohol. If you think these foods are aggravating your hot flashes, simply avoid them.[2]

Sleep problems are another symptom of menopause. Nighttime hot flashes accompanied by drenching perspiration are called "night sweats."[1] Night sweats can make it difficult for a woman to fall asleep or awaken her in the middle of the night. These sleep disturbances prevent the body from experiencing a good, full night's rest, which may result in difficulty concentrating. Getting adequate sleep allows the brain and body to re-energize and feel fully rested in the morning.

Mood changes may be reported by menopausal women. Mood disturbances may be attributed to disrupted sleep, stress, sadness that childbearing is no longer possible, the reality of getting older, and irritable menopausal symptoms. Depression, however, is *not* a symptom of menopause.[4] If you are feeling depressed, consult your doctor—treatment is available.

Vaginal and urinary problems may also occur. Some women may begin to notice changes in and around the vaginal area. Decreasing estrogen levels can cause the vagina to become dry and less flexible. The vagina may take longer to become moist during intercourse, which can result in discomfort during sexual activity. Vaginal lubricants and moisturizers are useful to combat such dryness and irritation. Regular sexual activity also can alleviate dryness.

Women may begin to feel the need to urinate more frequently or may experience leakage after coughing or sneezing because the muscles of the vagina become weak. This urgency to urinate, called "urinary incontinence," affects 40 percent of women age 45 to 64.[5] Unfortunately, fewer than half of these women seek help. Many women are embarrassed by the problem, and some do not know that treatment is available.[1] A number of prescription medications are available that can help with urinary incontinence; muscle-tightening exercises such as Kegel exercises to strengthen the pelvic floor muscles and other treatment options may also help.

Body composition will slowly begin to change around the time of menopause. Age-related changes such as thickening of the waist area, decreasing muscle mass, increasing amounts of fat tissue, and the thinning of skin occur at a faster rate after menopause. Although some of these changes are lifelong, healthy lifestyle modifications—including a balanced diet and regular exercise—will help to slow these progressions.

The Postmenopausal Woman

The years following menopause are referred to as postmenopausal. During the remainder of a woman's life, estrogen production has completely stopped. Her body no longer undergoes hormonal

continued on page 5

changes. Hot flashes, night sweats, mood swings, and vaginal and urinary problems have decreased or even stopped completely.

At this stage, it is important for women to protect their body against the long-term effects associated with menopause, including osteoporosis and coronary artery disease.

Osteoporosis, the "brittle bone disease," is preventable and treatable for most women. It affects about 10 million people in the United States, of which 8 million are women. Bone mass losses up to 20 percent occur in the first five to seven years after menopause. This contributes to the 1.5 million bone fractures that occur each year. One out of every two women over age 50 will suffer an osteoporosis-related fracture in her lifetime.[6]

While many risk factors are associated with developing osteoporosis, the most significant is menopause. Osteoporosis is caused by a decrease in bone mass, which makes bones fragile. As a woman ages, her bone tissue breaks down at a faster rate than when she was younger, and her body is unable to rebuild bone as fast as it once did. When this happens, the skeleton becomes weak, and bones may break more easily, sometimes with no obvious force. Estrogen plays a key role in maintaining bone structure and bone mass. In menopause, when the body has stopped producing estrogen, those levels decline, and bone loss increases.

Osteoporosis is difficult to detect in its early stages. Warning signs usually don't occur until the disease has reached its more advanced stages. Fractures most commonly occur in the wrists, hips, and spine. Some early clues include changes in the shape of the spine and/or loss of height. A loss of height of more than 1.5 inches should be a concern.[1] Risk factors for osteoporosis include Caucasian or Asian race, slender body frame, smoking, perimenopause, or a genetic history of osteroporosis.[2] If you are peri- or postmenopausal and have not already talked to your doctor about having a bone-density screening to assess your risk for osteoporosis, you should make that a priority.

Coronary artery disease (CAD), also referred to as heart disease, is the number-one killer of women in North America. CAD occurs when arteries (blood vessels that carry blood away from the heart) become narrow or blocked. Arteries supply the heart with blood and oxygen. When arteries become blocked, the heart does not get enough oxygen and cannot function properly. Untreated, this can lead to a heart attack, stroke, or even sudden death. Blockages in arteries usually are due to high levels of cholesterol in the blood.[1, 7]

Heart disease often is erroneously referred to as a "man's disease," and women are more likely to worry about having breast cancer than heart disease. But, consider these statistics:

- One in 12 women age 45 to 64 has heart disease, and this increases to one in four for women over age 65.[8]
- Heart disease kills six times more women than breast cancer.[9]
- In 2001, cardiovascular disease (including CAD) claimed the lives of 248,184 females compared with 41,394 lives from breast cancer and 65,632 from lung cancer.[10]
- Men have an increased risk for heart disease after age 45; women are afforded the protective effects of estrogen only until menopause.[1]

continued on page 6

Once a woman reaches menopause and her estrogen level drops, her risk for heart disease increases rapidly. Estrogen helps protect the heart and arteries against fatty deposits (cholesterol) that can clog blood vessels. The two main forms of cholesterol are high-density lipoproteins, the so-called good, protective cholesterol, and low-density lipoproteins, the so-called bad cholesterol, which raises a person's risk for heart attack. Estrogen increases the amount of "good" cholesterol in the body, while decreasing the "bad" cholesterol.[5] During menopause, however, this reverses because estrogen levels drop—which raises bad cholesterol levels. This can lead to an increase in the risk of heart disease. Other risk factors that contribute to heart disease are high blood pressure, smoking, a high-fat diet, diabetes, lack of exercise, and obesity.[1, 6]

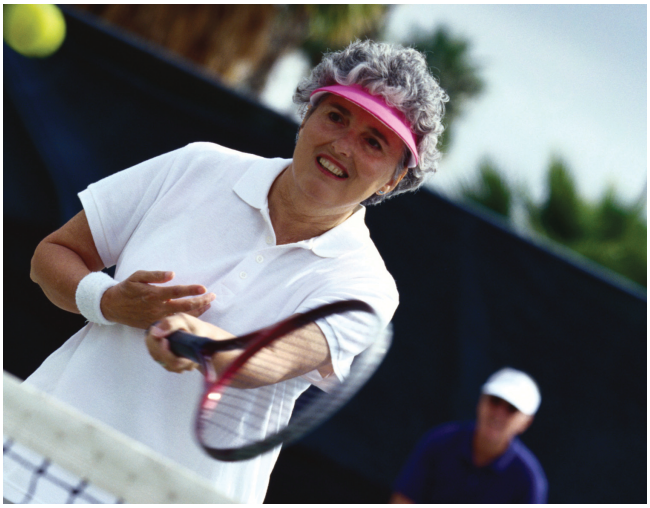
Treating Menopause Symptoms, Preventing Long-term Effects

Lifestyle changes, nonprescription therapy, and prescription therapy all can help reduce both the short- and long-term effects of menopause. It helps to know your genetic history of heart disease, osteoporosis, and breast cancer, as this plays a significant role in determining which treatment may be best for you.

Lifestyle Changes [1]

Smoking: Smoking is the single greatest preventable cause of illness and premature death. It causes the body to produce less estrogen, resulting in increased risks of early menopause, osteoporosis, and Alzheimer's disease. Furthermore, smoking also raises the risk for heart disease, cancer, and lung disease. If you currently smoke and are unable to quit on your own, talk with your doctor about effective smoking cessation methods, including over-the-counter products and prescription medications that can help you quit *now*.

Exercise: Exercise is a crucial ingredient missing from many women's lives. Women have reported that exercise helps reduce both the severity and frequency of hot flashes, helps them sleep better, and improves their mood. Activities such as walking, aerobics, and weight training help with balance and weight management, as well as strengthening bones, muscles, and the heart. Health experts recommend exercising three times per week for 30 to 60 minutes. If time is a factor in squeezing exercise into your busy schedule, remember that you can get as much benefit by breaking exercise sessions into several 15-minute segments a day. Also, remember that moderate activity is just as good for you as strenuous activity. As always, consult your doctor before starting any exercise regimen if you've been sedentary or have a health problem.



Diet: During menopause, women have special dietary needs. Heart disease and osteoporosis both are greatly affected by diet. A well-balanced diet can help lower your risk for coronary artery disease. Women need to decrease their saturated fat and cholesterol intake, as well as limit salt and alcohol intake. It also is important to eat plenty of fruits, vegetables, and whole-grain foods.

Calcium plays a major role in preventing osteoporosis. The recommended daily allowance for postmenopausal women who are not receiving hormone replacement therapy (HRT) is 1500 mg of total elemental calcium daily. For women receiving HRT, the recommended daily allowance

continued on page 7

is 1000 mg per day. Eating calcium-rich dairy products, calcium-fortified foods, and taking calcium supplements can all help women meet their daily calcium needs. Calcium supplements that include vitamin D are preferred because vitamin D helps the body absorb calcium. Recommended doses of vitamin D are 400 IU per day for women ages 51 to 70, and 600 IU per day for women over age 70.[11] Exposure to sunlight also helps the body produce vitamin D.

Weight management: Being overweight increases a person's risk for heart disease, diabetes, and arthritis. Diet and exercise together can help manage weight. Regular weight-bearing and muscle-strengthening exercise help strengthen bones and reduce the risk for osteoporosis.

Nonprescription Product Options [12]

Soy products: Soy products are known to contain naturally occurring compounds—known as phytoestrogens, or isoflavones—that have a similar effect on the body as estrogen. These compounds are found in certain plants, beans, vegetables, herbs, and seeds. Isoflavones can be found in such foods as soybeans, tofu, and soymilk, and are available in liquid and powders. Experimental studies have shown that the equivalent of 60 mg to 90 mg of isoflavones may improve the symptoms of menopause. However, soy may not have beneficial effects on bone mineral density, cognitive ability, or lipid levels.

Be aware that these products are not monitored by the U.S. Food and Drug Administration (FDA) for safety or effectiveness, and their labels may have misleading information or claims. Discuss the matter with your doctor before incorporating increased amounts of phytoestrogen-containing foods into your diet.

Multivitamins: Vitamins E and B, folic acid, and calcium all can play a positive role in managing menopause symptoms. Taking a multivitamin every day may help reduce the severity and frequency of hot flashes, as well as reduce the risk for osteoporosis and heart disease.

Prescription Treatment

Hormone replacement therapy (HRT): As a woman approaches menopause, her estrogen and progesterone levels gradually decrease. These hormonal fluctuations vary from woman to woman. HRT is medical treatment that provides estrogen and progesterone to replace the body's declining levels.

There has been a lot of controversy surrounding the safety and efficacy of HRT. Position statements and recommendations based on the Women's Health Initiative study are continuously being released by the FDA, National Institutes of Health, and National Heart, Lung, and Blood Institute to clarify how these findings will influence patient care.

In the past, postmenopausal women usually were given only estrogen replacement. However, estrogen causes the uterus lining to grow and, when given in high doses, can cause endometrial cancer. Therefore, estrogen was prescribed in combination with progestin (a synthetically created progesterone), which reduces the risk for endometrial cancer. However, if a woman's uterus was surgically removed through a hysterectomy, progesterone was not necessary and estrogen was used alone.

continued on page 8

HRT was commonly prescribed to women because it was believed to help prevent osteoporosis and decrease menopausal symptoms (hot flashes, night sweats, vaginal, and urinary problems), Alzheimer's disease, and colorectal cancer. As a result of the *perceived* benefits of HRT, many women were told to continue their treatment indefinitely.[1]

The Women's Health Initiative study was designed to test whether the proposed benefits of estrogen alone and estrogen-plus-progestin therapy were actually real. Estrogen, when used alone, was associated with a reduced risk of bone fractures. However, the study reported increased risks of stroke and blood clots, no differences in heart attack or colorectal cancer risks, and uncertain effects for breast cancer.

The estrogen-plus-progestin study groups also reported fewer fractures, in addition to reduced risks of colorectal cancer. Unfortunately, the risks of this form of HRT were shown to outweigh the benefits. Compared to the placebo group, there was an increased risk of heart attacks, stroke, blood clots, and breast cancer. Furthermore, neither the estrogen alone nor the estrogen-progestin combination prevented dementia or Alzheimer's disease.[12, 13]

The FDA now advises that HRT should not be taken to reduce the risk of heart disease. Hormone replacement therapy is approved for short-term treatment of moderate to severe hot flashes and vaginal problems. Even in these circumstances, advises the FDA, *hormone replacement therapy should be used at the lowest effective dose for the shortest duration to adequately relieve symptoms.*[13, 14]

Only women who fail non-estrogen therapy (discussed on the following pages) or have a significant risk of osteoporosis should consider using estrogen treatment for the prevention of osteoporosis.[13] As with any medical treatment, it is very important to discuss the risks and benefits associated with HRT therapy with your doctor. Women who have been treated with HRT for three to four years should speak with their doctor to determine whether to continue therapy. Together, you and your doctor can decide if HRT is right for you.

HRT risks and side effects: The Heart and Estrogen/progestin Replacement Study (HERS) showed that women diagnosed with heart disease who use HRT have an increased risk of death due to complications related to heart disease.[15] HRT also may increase the chance of developing gallbladder disease.[16]

Some women have risk factors that may exclude them from using HRT.[1] These factors include a history of:

- breast cancer
- abnormal uterine bleeding of an unknown cause
- blood-clotting disorders
- liver disease.

Many women complain of unpleasant side effects associated with HRT, which is the most common reason why women discontinue their treatment. Common side effects associated with estrogen use include nausea, headaches, and heavy bleeding.[17] Other side effects include breast tenderness, bloating, anxiety, irritability, depression, and abdominal cramping. If you are experiencing these side effects

continued on page 9

and feel they are intolerable, your doctor may change your HRT dose or formulation (cream, patch, or pill).

More than 95 percent of postmenopausal women who take HRT have monthly withdrawal bleeding, which resembles monthly menstruation. Bleeding usually begins the sixth day after progestin is given. If you are bleeding before day six or it is unusually heavy, contact your doctor. Generally, bleeding stops after six months. If your bleeding is still heavy after nine months, contact your doctor.[17]

Most menopausal symptoms disappear within three months. However, it is important not to discontinue treatment based solely on side effects or without discussing the issue with your doctor. If some of your symptoms, such as breast tenderness and hot flashes, do not improve within three months, consult your doctor. It is also important

Table 1: Currently Available Brand-Name Hormone Replacement Therapies

Type of estrogen	Brand Names	Strengths Available*
Oral estrogens (taken by mouth)	Premarin®	0.3, 0.625, 0.9, 1.25, 2.5 mg
	C.E.S.®	0.3, 0.625, 0.9, 1.25 mg
	Estrace®	0.5, 1, 2 mg
	Ogen®	0.625, 1.25, 2.5 mg
	Cenestin®	0.3, 0.625, 0.9, 1.25 mg
Transdermal estrogens (applied to the skin)	Alora®	75 mcg (once a week)
	Estraderm®	25, 50, 100 cgm (twice a week)
	Vivelle®	37.5, 50, 75, 100 cgm (twice a week)
	Climara®	50, 100 cgm (once a week)
	Estracomb® (estradiol 50 mcg alone every 2 weeks and with noethindrone 250 mcg every 2 weeks)	50 mcg
	Estrogel® (topical gel applied to each arm daily)	2.5 gm
	FemPatch®	25 mcg (once a week)
Vaginal estrogens (inserted into vagina)	Premarin® Vaginal Cream	0.625 mg/gm
	Ortho Dienestrol® Cream	0.1 mg/gm
	Estring® Vaginal Ring	7.5 mcg/day
	Femring®	0.05 mg
Oral progetin (contains only the hormone progesterone without estrogen used in women who cannot take estrogen)	Provera®	2.5, 5, 10 mg
	Prometrium®	100 mg
Oral estrogen/ testosterone combinations	Estratest®	1.25 mg esterified estrogens and 2.5 mg methyltestosterone
	Estratest HS®	0.625 mg esterified estrogen and 1.25 mg methyltestosterone
	Premarin® with methyltestosterone	0.625 mg esterified estrogen and 5 mg methyltestosterone, 1.25 mg esterified estrogen and 10 mg methyltestosterone

*mcg = micrograms, mg = milligrams, gm = grams

continued on page 10

to realize that these side effects are treatable. Together, you and your doctor can find a dose and formulation that best suits you based on your personal history and risk factors. Table 1 lists some hormone replacement medications currently available on the market.[18] Please note: This is *not* a comprehensive list.

Alternate Prescription Treatments for Osteoporosis Prevention

Alternative prescription medications are available for the prevention of osteoporosis. While they do not prevent the short-term effects of menopause, they are safer alternatives than estrogen therapy. It is important to talk to your doctor to see if any of these therapies are right for you.

- **Bisphosphonates: *Fosamax*® *(alendronate), Actonel*® *(risedronate)***[19, 20]—Both Fosamax and Actonel are used for the prevention and treatment of osteoporosis in women who cannot or do not want to take HRT. They generally work by reducing bone loss and increasing the amount of new bone being built. It generally takes about three months of treatment before effects are seen. Beneficial effects, which include increased bone mineral density and decreased risk of fractures, are seen when the medication is taken regularly. However, certain medical conditions, such as disorders of the esophagus and severe kidney disease, and the inability to remain upright for at least 30 minutes after taking the medication (which can prevent esophageal side effects) might preclude someone's taking these medications.
- **Selective estrogen receptor modulators: *Evista*® *(raloxifene)***[21]—Used for the prevention and treatment of osteoporosis in postmenopausal women, Evista works by decreasing the amount of bone loss due to decreased estrogen levels during menopause. It also has been shown to decrease LDL cholesterol and triglyceride levels, which helps reduce the risk of heart disease. In studies, Evista did not increase the risk of breast cancer. In fact, it has been shown to decrease the risk of breast cancer, so it may be used in women who have either a genetic or personal history of breast cancer. Evista is available in tablet form and generally is taken once a day.

Conclusion

Menopause is inevitable for every menstruating woman. Each woman will experience different symptoms, but the hormonal process is the same. Treatment depends on your symptoms, your genetic history, and your risk level of developing serious long-term diseases.

Self-care can help you stay on top of your health:

- Schedule regular checkups, pelvic and breast exams, mammograms, and Pap smears. Pap smears may indicate changes in the vaginal lining caused by changes in estrogen levels.[22]
- Perform monthly breast self-examinations, and contact your doctor if you notice a lump.
- Maintain open communication with your healthcare provider, which is key to your health during and after the menopause years.[1] It is important to visit your healthcare provider to discuss whether any type of menopause related treatment is necessary and, if so, which method is right for you.

Resources

- **The North American Menopause Society (NAMS)**
  P.O. Box 94527
  Cleveland, OH 44101-4527
  1-800-774-5342
  www.menopause.org.

continued on page 11

- **The National Women's Health Information Center**
  8550 Arlington Blvd., Suite 300
  Fairfax, VA 22031
  1-800-994-WOMAN (9662)
  Hearing impaired: 1-888-220-5446
  www.4woman.gov.

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continued on page 11

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